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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,476	11/21/2003	Masakatsu Saitoh	Q78499	8098
23373	7590	09/09/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/717,476	SAITO ET AL.	
	Examiner Helen C. Kwok	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/23/03 &amp; 6/7/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: ____                                     |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. The disclosure is objected to because of the following informalities. Appropriate correction is required.

There is no description of reference numerals 55 and 90 in the specification as illustrated in Figure 1.

***Claim Objections***

3. Claims 1-17 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 3, the phrase “the center” should be changed to – a center --.

In claim 10, line 4, the phrase “the center” should be changed to – a center --.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, line 1, the phrase "the paste" is vague. Is this referring to the paste claimed in claim 11, line 3 or claimed in claim 10, line 14? Please clarify.

In claim 16, lines 5-6, the phrase "the strain gauge" lacks antecedent basis. In line 6, the phrase "the elastic support" lacks antecedent basis. In lines 6-7, the phrase "the strain gauge" lacks antecedent basis.

In claim 17, lines 5-6, the phrase "the strain gauge" lacks antecedent basis. In line 6, the phrase "the elastic support" lacks antecedent basis. In lines 6-7, the phrase "the strain gauge" lacks antecedent basis.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 6-11 and 14-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-14 of copending Application No. 10/733,643. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the elements presently claimed are claimed in the copending Application. Hence, the instant application 10/717,476 is not patentably distinct from the copending application 10/733,643.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,895,853 (Shiota) in view of either U.S. Patent 6,263,735 (Nakatani et al.) or JP 7-128361 (Takayama).

Shiota discloses a semiconductor acceleration sensor comprising, as illustrated in Figures 3-9, a sensor chip 1 having a mass portion 2; a thick frame surrounding the mass portion; a plurality of elastic support arms 3 bridging an upper surface of the mass portion and an upper surface of the thick frame; strain gauges (not illustrated or numbered; column 3, lines 48-51) formed on upper surfaces of the elastic support arms; an upper regulation plate 5 mounted with a predetermined gap between the upper surface of the mass portion and a lower surface of the upper regulation plate to cover the acceleration sensor chip and fixed on the upper surface of the thick frame by a paste wherein the paste is adhesive 8 mixed with hard plastic particles 11. (See, column 2, line 26 to column 3, line 51). The only difference between the prior art and the claimed invention is a plurality of recesses on the upper surface of the thick frame. The references, Nakatani et al. and Takayama, discloses an acceleration sensor having a plurality of recesses on a thick frame. (See, Figures 11-16, column 7, line 1 to column 8, line 49 of Nakatani et al.; Figure 1, Abstract of Takayama). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of employing the plurality of recesses on the surface of the thick frame as suggested by the references, Nakatani et al. and Takayama, to the apparatus of Shiota to provide protection to the mass and the elastic

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arms when an external force/pressure is applied such that the thick frame will absorb the force/pressure and that the adhesive will not spread outside of the recesses to the mass and the elastic arms.

With regards to claim 2, Shiota further discloses that the diameters of the hard plastic balls are equal or smaller than the predetermined gap. (See, column 4, lines 3-14).

With regards to claims 3-5, the references, Shiota, Nakatani et al., and Takayama, do not explicitly specify such parameters for the paste mixed with the hard plastic balls and the total area of the plurality of recesses. However, to have set such test characteristics as in these claims by one skilled in the art at the time of invention would have been obvious to recognize that such modification and variations can be made based on experimentations without departing from the scope of the invention.

With regards to claims 6-9, the references, Nakatani et al. and Takayama, further discloses a side opening on an outer side surface of the thick frame. Furthermore, the references teaches a rectangular thick frame with the recesses located in each corner. (As observed in the figures in these references.).

With regards to claims 10-17, the claims are commensurate in scope with claims 1-9 and are rejected for the same reasons as set forth above. Furthermore, Shiota further discloses a protection case 6 by a paste mixed with hard plastic balls (as observed in the figures). Also, the references teach a plurality of input/output terminals connected to conductors.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to apparatus containing an attachment layer having spacer elements.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 2, 2004

HELEN KWOK  
PRIMARY EXAMINER

